

Chapter 140

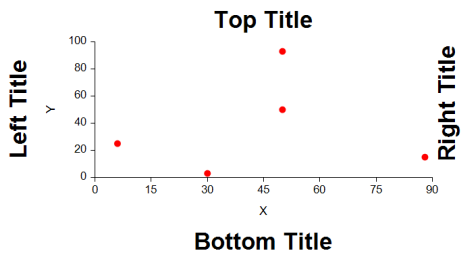
Graphics Components

Introduction


This chapter explains how to use common graphics components such as titles, axes, ticks, and legends.

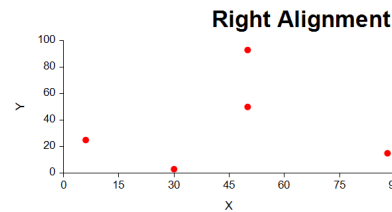
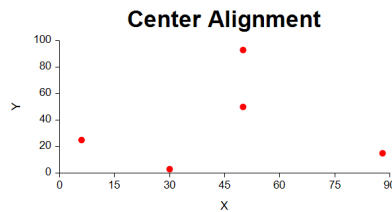
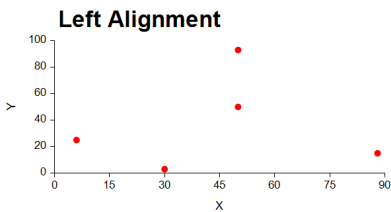
Titles

This section discusses options that are available for adding titles to graphs. By default, most graphs have a title centered at the top, but they can also be placed on the left, right, and bottom.



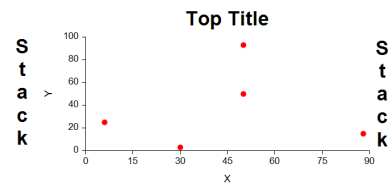
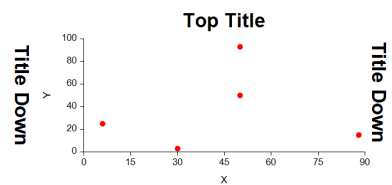
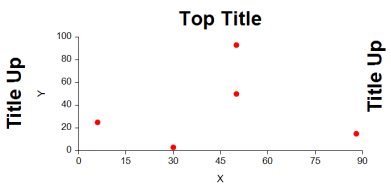
Layout - Text Alignment

You can change the relative position of the title by clicking on the  (Layout) button and changing the text alignment. Three alignment options are available.



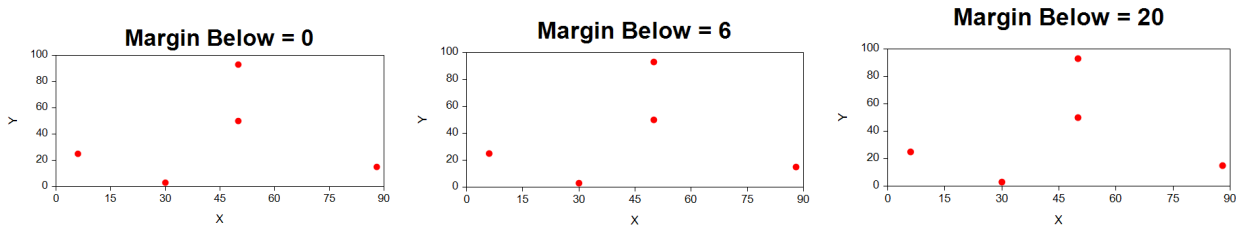
Layout - Text Direction

Vertical titles have text direction option that lets you rotate the text up, down, or have it stacked.



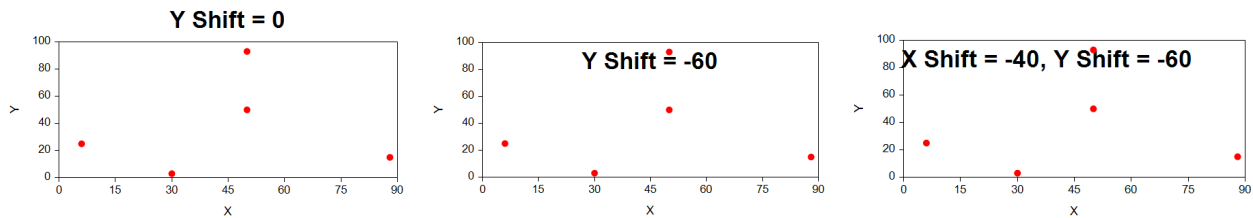
Layout - Margins

Margins let you add space above and below horizontal titles and to the left and right of vertical titles. The default amount is 6.



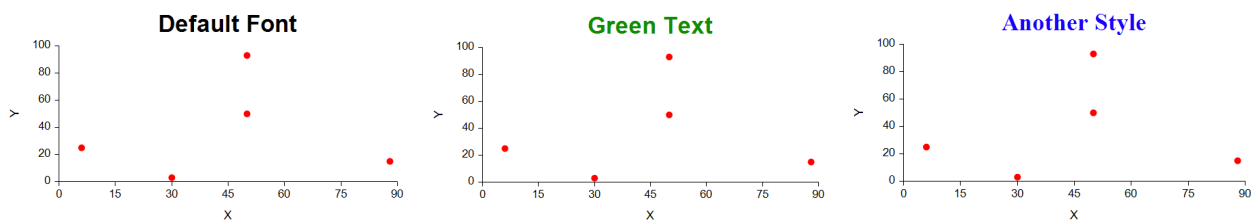
Layout - Shift

Shift options move the text a given number of pixels in the X or Y direction. These options let you fine tune the placement of the text.



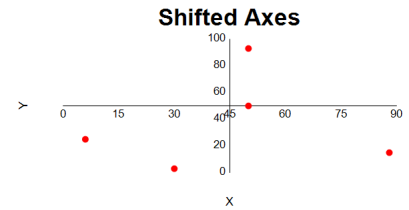
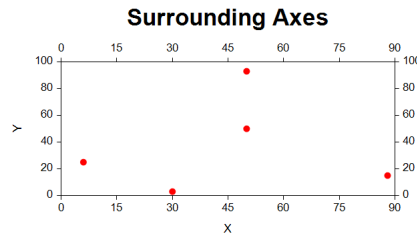
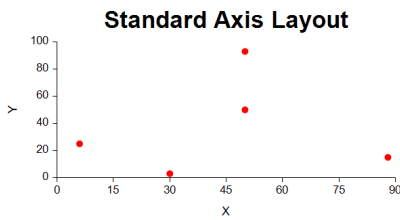
Font

The font settings let you change the style, size, and color of the text.



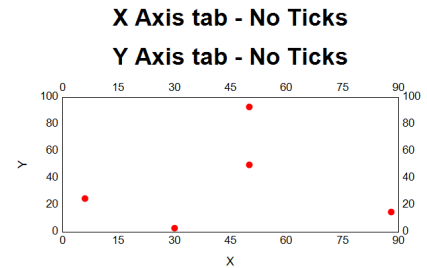
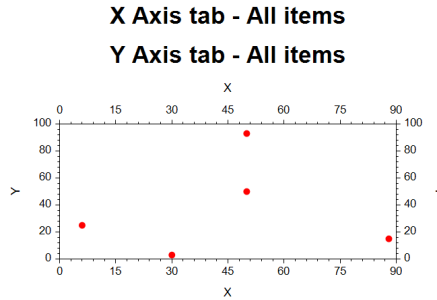
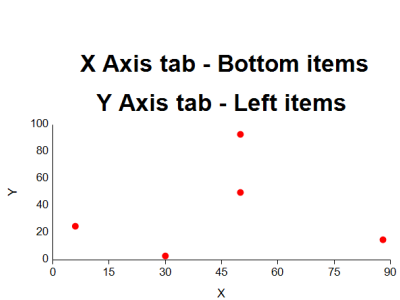
Axes

This section discusses options that are available for the axes. By default, most graphs have the vertical (Y) axis on the left and the horizontal (X) axis along the bottom. Many other axis layouts are possible as the other examples show.



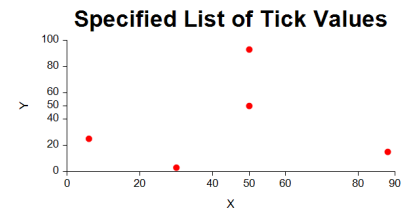
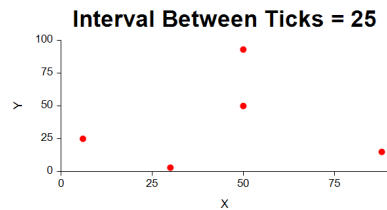
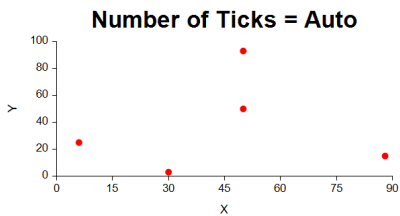
Displayed Axes

To change which axis lines are displayed, click the X Axis (or Y Axis) button, then check the desired Top and/or Bottom check boxes.



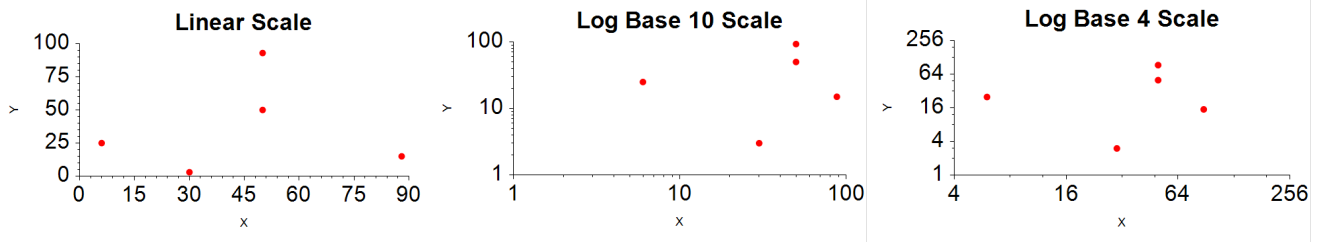
Number of Ticks

The number of ticks and their values can be modified by pressing the Tick Number and Spacing button in the Major Ticks section to bring up the Number of Ticks window.



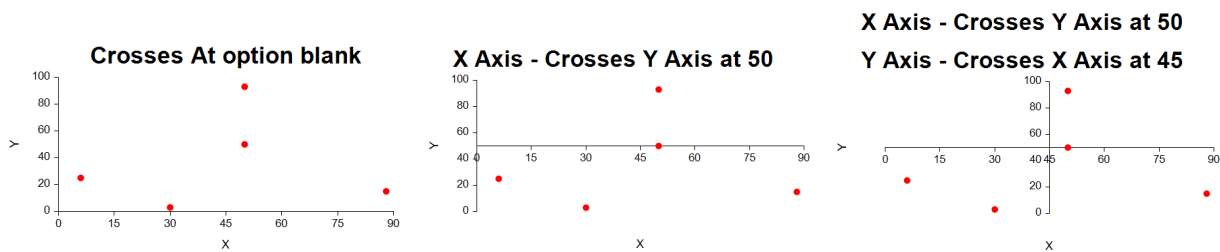
Scale

The scale can be linear or logarithmic.



Axis Position

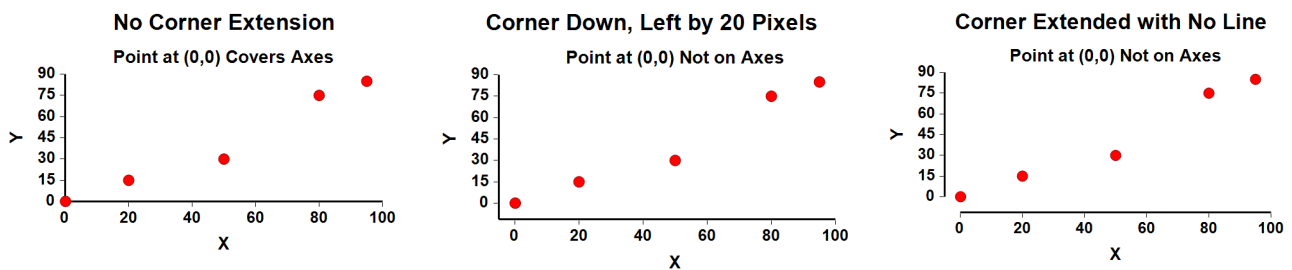
The position of an axis can be changed by specifying where it crosses the other axis.



Corners

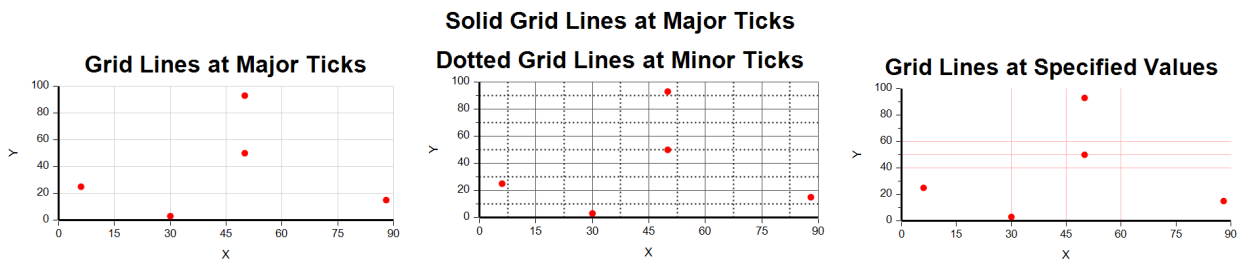
The ends of the axes can be extended a little further so that tick labels are not too close together and so that data points do not fall directly on the axis line. The value is the number of pixels that the axes are extended in the indicated direction.

Note that extending an axis does not change the position of the data points. It simply changes where the axis is drawn.



Grid Lines

You can display grid lines from the tick marks or at specified values from each axis.



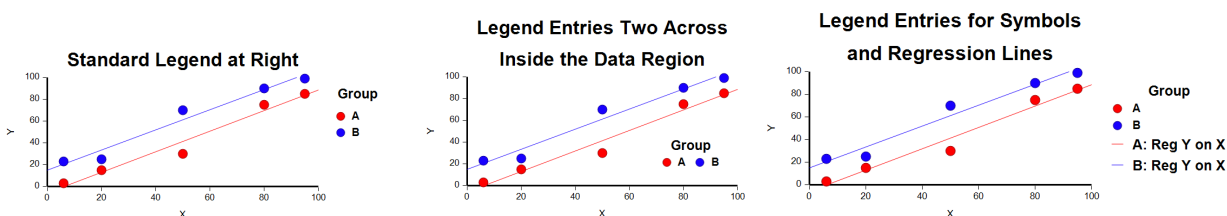
Legend

When needed, a detailed legend can be placed at several positions on the graph. Legend entries can be created for all overlaid lines as well as for any extra lines and points.

The legend in the first plot is displayed automatically when there are two groups.

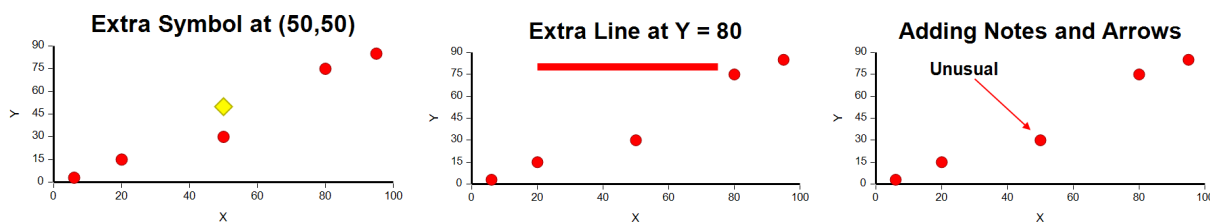
The legend in the second plot was generated by selecting the inside, lower-right position on the General tab. Also, the Number of Columns was set to 2 on the Layout tab. Finally, the Legend's Title 1 layout was changed on the General tab so that the Margin Below Text is 0 and the Shift in the Y Direction is -4.

The legend in the third plot was created by checking the Lin Reg (Y on X) box of the Trend Lines tab as well as the Entries for Each Group box.



Extra Lines, Symbols, and Notes

You can add lines, symbols, and notes to the graph using options available on the Extras tab. These lines and symbols can be added to the legend.

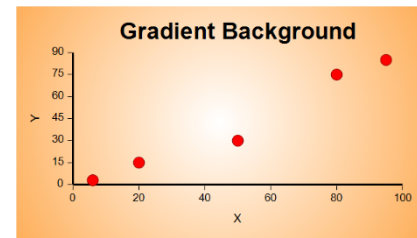
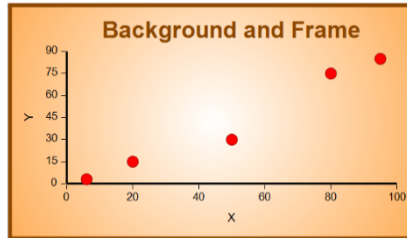
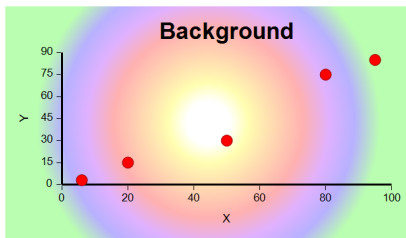


Background

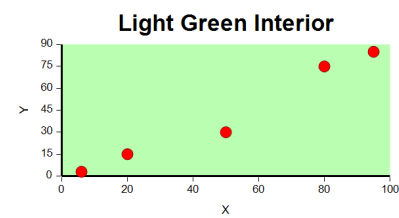
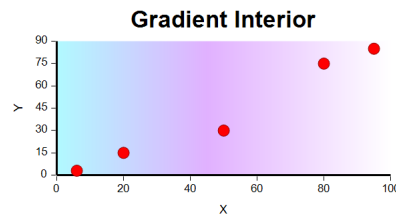
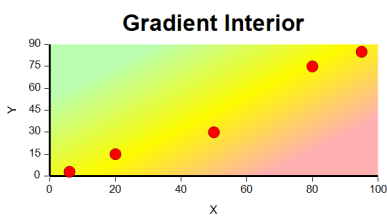
The Background tab lets you change the background color, the border, and the size of the plot.

Background Fill

You can change the fill or add a frame to your plot using the options of this section.



Interior Fill



Size (in Pixels)

You can change size of the plot using the Width and Height settings. Roughly, 100 pixels is about one inch.

Pixels to Inches Conversion

The number of pixels per inch is set by the DPI (dots per inch) setting of the monitor. Commonly, the DPI setting is 96 or 120, but other settings are possible. To convert from pixels to inches, divide the number of pixels by the DPI value.

For example, a width of 500 pixels on a monitor running at 120 DPI is $500/120 = 4.17$ inches. Furthermore, to obtain a five-inch interior plot width on a 120 DPI monitor, set the width to $5 \times 120 = 600$ pixels.

